

CLAIMS

1.-12. (Canceled)

13. (Currently Amended) A method ~~for transrating a compressed bitstream into a plurality of output bitstreams each having a corresponding bit rate, the method comprising:~~
~~extracting a packet payload from the compressed bitstream;~~
~~decoding the packet payload into at least one video frame;~~
~~providing the at least one video frame to a plurality of encoders associated with the~~
generating a plurality of output bitstreams using a plurality of encoders and at least one video frame from a packet payload of a compressed bitstream, each of the plurality of encoders having comprising a corresponding quantization scale factor;
adjusting the quantization scale factor for each of the plurality of encoders to change the bit rate of each of the plurality of output bitstreams; and
incorporating the plurality of output bitstreams into a video block comprising a header, an input video segment, and at least one video segment associated with at least one of the output bitstreams; and
selecting the at least one video segment responsive to bit rate demands of other concurrent output streams.

14. (Original) The method of claim 13 wherein the at least one video frame includes a DCT coefficient associated with a partial decode of the packet payload.

15. (Previously Presented) The method of claim 13 further comprising segmenting the compressed bitstream into video segments.

16. (Previously Presented) The method of claim 13 further comprising segmenting at least one of the plurality of output bitstreams into video segments.

17. (Previously Presented) The method of claim 15 wherein at least one video segment includes one of a group of coded pictures, a coded frame, and a video slice.

18. (Currently Amended) The method of claim ~~13~~ 15 wherein the video block includes a header, an input video segment, and at least one segment corresponding to at least one of the plurality of output bitstreams further comprising interleaving transport packets of the selected at least one video segment with transport packets of the other concurrent output streams.

19. (Canceled)

20. (Currently Amended) The method of claim ~~13~~ 18 wherein the video block header comprises at least one of packet schedule information, compression statistics, and a video segment offset.

21. (Currently Amended) The method of claim 13 further comprising adjusting the quantization scale factor to change the bit rate by at least one of a fixed percentage ~~and~~ or a fixed amount.

22.-37. (Canceled)

38. (Currently Amended) A system ~~to transrate a compressed bitstream into a plurality of output bitstreams each having a bit rate, the system comprising:~~

~~an extractor module to extract a packet payload from the compressed bitstream;~~

~~a decoder module to decode the packet payload;~~

a plurality encoders corresponding to ~~the~~ a plurality of output bitstreams, each of the plurality of encoders having a quantization scale factor;

a quantization module to adjust the quantization scale factor for each of the plurality of encoders to change ~~the~~ a bit rate of each of the plurality of output bitstreams; and

a formatter module to incorporate the plurality of output bitstreams into a video block comprising a header, an input video segment, and at least one video segment associated with at least one of the output bitstreams; and

a switch module to select the at least one video segment responsive to bit rate demands of other concurrent output streams.

39. (Currently Amended) The system of claim 38 ~~wherein the~~ further comprising an extractor module is configured to extract a packet payload from a compressed bitstream and to segment the compressed bitstream into video segments.

40. (Previously Presented) The system of claim 39 wherein a video segment includes one of a group of coded pictures, a coded frame, and a video slice.

41. (Canceled)

42. (Currently Amended) The system of claim 38 wherein the switch module is further configured to interleave transport packets of the selected at least one video segment with transport packets of the other concurrent output streams ~~the video block comprises at least one video segment corresponding to at least one of the plurality of output bitstreams and a video block header.~~

43. (Original) The system of claim 42 wherein the video block header comprises at least one of packet schedule information, compression statistics, and a video segment offset.

44. (Currently Amended) The system of claim 38 wherein each of the plurality of encoders is configured to adjust the quantization scale factor to reduce bit rate by at least one of a fixed percentage ~~and~~ or a fixed amount.

45.-49. (Canceled)

50. (Previously Presented) The method of claim 18 further comprising storing the at least one video frame in at least one frame buffer.

51. (Currently Amended) The method of claim 18 further comprising ~~selecting the at least one video segment responsive to the corresponding bit rate as an output stream~~ transmitting the interleaved transport packets of the selected at least one video segment with the transport packets of the other concurrent output streams to a buffer for outputting to a channel at a constant bit rate.

52. (Canceled)

53. (Previously Presented) The method of claim 51 further comprising:
including compression statistics into the header; and
normalizing a video quality of the output stream responsive to the statistics.

54. (Previously Presented) The system of claim 38 further comprising at least one frame buffer to store at least one video frame of the compressed bitstream.

55. (Currently Amended) The system of claim ~~38~~ 42 ~~further comprising a switch to select the at least one video segment responsive to the corresponding bit rate as an output stream~~ wherein the switch module is further configured to transmit the interleaved transport packets of the selected at least one video segment with the transport packets of the other concurrent output streams to a buffer for outputting to a channel at a constant bit rate.

56. (Canceled)

57. (Currently Amended) The system of claim 55 wherein the switch module is further configured to:
include at least one compression statistic into the header; and
normalize a quality of the output stream responsive to the statistics.